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ABSTRACT

In the United States, the family is regarded as primarily responsible for financing the education and care of children under age 5 as well as the education of offspring in postsecondary education, with the intervening years of education publicly funded and considered the responsibility of society at large. This paper describes the student financial aid system for postsecondary education and identifies strategies with potential for financing an equitable, accessible system of high quality early childhood education and care. Presented in four major sections, the paper reviews the purposes and sources of financial aid; describes the delivery system, focusing on how financial need is determined; discusses accreditation as an indicator of quality in financial aid funding; and explores the potential implications of the postsecondary financial aid model for financing quality early care and education programs. (Contains 52 endnotes.) (KB)

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THE POSTSECONDARY FINANCIAL AID SYSTEM: POTENTIAL STRATEGIES FOR EARLY CARE AND EDUCATION

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THE POSTSECONDARY FINANCIAL AID SYSTEM: POTENTIAL STRATEGIES FOR EARLY CARE AND EDUCATION

Teresa Vast*

Introduction

In the United States, the family is regarded as primarily responsible for financing the education and care of children under age five as well as the education of children in postsecondary institutions. The intervening years of K-12 education are publicly funded, considered the responsibility of society at large. Yet, the total public resources for higher education far exceed those for early care and education¹—amounting to about \$4,552 for every postsecondary student compared to \$1,395 for every child under age six in non-parental care.²

This disparity is not surprising—the importance of higher education to an individual's economic success and to the nation's competitiveness is deeply ingrained in the American psyche. There is ample evidence that a college education results in economic and other benefits to graduates, who on average earn 75 percent more than high school graduates.³ In contrast, the importance of quality early care and education to individuals and to society at large is not as widely known. The finding that seven dollars in public expenditures is saved for every dollar spent for quality early childhood education⁴ and the recent brain research documenting the importance of the early years⁵ have not yet captured the public's attention.

In addition to public funding, postsecondary education attracts significant private sector contributions. Support for postsecondary education from both public and private sources is provided in two major ways: directly to institutions and in financial aid to students to pay postsecondary tuition and fees and other attendance costs. The purposes of this paper are to describe the student financial aid system, and to identify strategies it utilizes which have potential for application in the financing of an equitable, accessible system of high quality early childhood education and care.

The paper will (1) review the purposes and sources of financial aid; (2) describe the delivery system, with a focus on how financial need is determined; (3) discuss accreditation as an indicator of quality in financial aid funding; and (4) explore the potential implications of the postsecondary financial aid model for financing quality early care and education programs.

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Foundations of the Financial Aid System

The primary function of the postsecondary financial aid system is to ensure that funds provided by a variety of sources are fairly distributed to those who can benefit from further education, but without assistance, would be unable to pursue studies at the postsecondary institution of their choice. The basic premise of need-based financial aid is that it is the family's responsibility to pay the expenses of a child's postsecondary education to the extent of their ability, but that lack of family finances should not keep an able student from opportunities provided by higher education.

A central feature of the system is the use of a *need analysis methodology* to measure the ability of students and their families to pay for higher education. The analysis establishes a family's need for assistance relative to the cost of the school the student chooses. In seeking to define a uniform level of sacrifice for families of similar means, the methodology relies on the use of standard measures of the cost of living (indexed by family size) and the cost of saving for retirement. The result of the analysis, the *estimated family contribution*, allows for protection of family income and savings to maintain a minimum standard of living, save for retirement, pay employment expenses and taxes, and pay for the postsecondary costs of other family members.

Need analysis is critical to understanding the affordability of postsecondary education, and the basic premises of such a methodology offer potential in defining affordability of early childhood programs as well.

History and Purposes of Public Funding: The Federal Role

Interestingly, both young children and college students were targeted as worthy investments in America's future in 1965, when Congress simultaneously launched Head Start as part of the Economic Opportunity Act and an array of student financial aid programs as part of Title IV of the Higher Education Act. Both were designed as gateways to equal opportunity in what President Johnson envisioned as The Great Society. It is to this historical purpose—equal educational opportunity—that the current financial aid system traces its roots.

The Higher Education Act of 1965 (HEA) dwarfed the only previous federal student aid: the GI Bill of 1944 that provided returning soldiers with a "thank you" and a chance to catch up with their peers, and the National Defense Student Loan Program, spurred in 1958 by the launching of Sputnik and the Cold War, that provided small loans and fellowships targeted to aspiring teachers and scientists. Title IV of the HEA produced unprecedented aid for college students, including need-based grants and work-study programs. Based on the nation's values of equity, equality, and opportunity, it included funds for identifying and recruiting the needy students who could benefit, and also guaranteed loans for middle income students.

The Higher Education Amendments of 1972 expanded the flexibility of how and where federal aid could be used, making it available to students aiming for certificates from vocational and trade schools and community colleges, and to those attending part-time. The original Act and its Amendments established an implicit policy of supporting a consumer-driven system, banking on student choice to influence quality in the higher education marketplace. In addition to improving quality, broad financial aid policy goals included increasing access and retention, and keeping college affordable.⁶

The federal government continues to channel about 90 percent of its postsecondary expenditures to student aid and only a small amount for direct educational expenses of institutions.⁷ But in spite of this enduring characteristic, dramatic changes have occurred over the years. In contrast to Head Start's design and purpose, which remained relatively unscathed during successive reauthorizations, student financial aid programs were tinkered with every five years, gradually changing the focus from broadening opportunity for the disadvantaged with grants based on financial need to expanding affordability for the

middle class with guaranteed loans, thus shifting the financing burden from the federal government to students and families.

In its position as the largest source for financial aid, the federal government defines the major features and processes of a system that serves more than 40 percent of all undergraduate students. Yet this dominant position in student financial assistance is misleading in the financing of higher education as a whole. States, choosing to directly support state institutions of higher education and to play only a minor role in funding student aid, carry five times the overall financing burden as that of the federal government.⁸

Private Initiative in Need Analysis

Federal financial aid is not the whole story. Decades prior to the federal commitment to student financial assistance and the emergence of a federal infrastructure for it, colleges devised their own methods for determining student financial need and awarding aid from endowments and other private sources. Representatives from different universities first met to share ideas about how to determine students' financial need in the early 1950s. They sought a more uniform system of need analysis and student aid administration, and as a result of their discussions, the College Scholarship Service (CSS) was established by the College Board. CSS provided a common financial aid application form and a means for assessing need,⁹ and within a few years, other independent need analysis services were also established.

In spite of this well-intentioned effort at uniformity, considerable variety in methodology persisted, and twenty years later there were 600 need analysis methods approved by the federal government. A National Task Force on Student Aid Problems met in the 1970s and proposed a uniform methodology. This was adopted by the major need analysis service providers, and became the standard tool for measuring need in financial aid offices across the country. When Congress finally mandated a specific methodology for determining federal aid in 1986, it was based on this consensus model. Students continued to apply for aid through various private need analysis services, paying fees for the service, until the Higher Education Amendments of 1992 substantively changed both need analysis and the application process, creating a free application form and a new methodology for determining eligibility for all federal aid.

Guiding Principles of Financial Aid Administration

A statement of principles, developed by a voluntary group of financial aid administrators, provides a framework for aid decisions.¹⁰ The principles—summarized here—are based on the philosophy, widely ascribed to by the financial aid community, that aid should be awarded on the basis of need to enable the greatest number of students to complete their education:

- The purpose of any financial aid program should be to provide monetary assistance to students who can benefit from further education, but who cannot do so without such assistance;
- Each college has an obligation to assist in realizing the national goal of equality of educational opportunity;
- Parents are expected to contribute according to their means, taking into account income, assets, number of dependents and other relevant information; and students are expected to contribute from their own assets and earnings, including appropriate borrowing against future earnings;
- Financial aid should be offered only after determination that the family's resources are insufficient to meet the student's educational expenses. The amount of aid should not exceed the difference between anticipated educational expense and family's resources; and
- The largest amount of total grant aid should go to students with the least ability to pay.

In spite of these principles, the nation's shrinking financial commitment to need-based aid and equal educational opportunity increasingly results in aid decisions that are made based on criteria other than need.

The System Today

The system continues to evolve, and the challenges it faces are as instructive as its achievements in the past three decades. Among the pressing issues being discussed in financial aid policy dialogues prior to the 1997 reauthorization of the HEA are concerns about equal opportunity and access, choice, affordability and quality.

The financial aid delivery system today has at its core the *Free Application for Federal Student Aid*, which requires processing through the federal central processing system, operated by a private service under contract to the U.S. Department of Education. The new federal need analysis methodology has been described by some financial aid experts as an index of eligibility for federal aid programs rather than a true test of a family's ability to pay.

CSS—the early pioneer of need analysis—still provides services to institutions that prefer a separate methodology for awarding non-federal aid. The CSS Institutional Methodology is designed to provide a more comprehensive measure of a family's income and assets, and thus their ability to pay college expenses. In seeking fair and equitable standards for aid distribution, CSS continues to revise the methodology, utilizing economic analysis and financial aid expertise through a consensus building process.

The nucleus of the highly decentralized student aid system continues to be the financial aid administrator in each institution. The financial aid office serves as the hub for the student, the university, the financing sources, and the need analysis services.

Financing Financial Aid

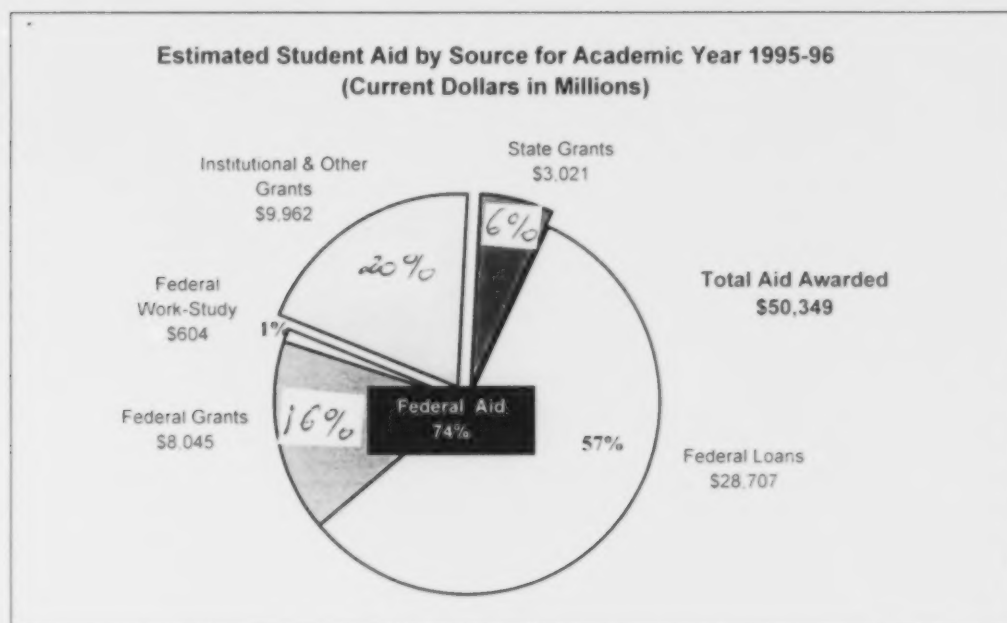
Amounts and Sources

Estimates for the 1995-96 academic year indicate that undergraduate and graduate students received more than \$50 billion in financial aid at public, private nonprofit and proprietary institutions of postsecondary education. The federal government is the predominant funding source for aid, providing nearly three quarters of the total through grants, direct and guaranteed loans and work-study programs.

Although states contributed just a small percentage of the total amount, it is important to note that state support of higher education subsidizes relatively low tuition rates, thereby providing indirect financial aid to students at state postsecondary schools regardless of their individual financial need.

Institutional aid dollars are drawn from private scholarships and fellowships administered by the institution, endowment earnings, annual donor giving, and tuition income.¹¹

The greatest portion of the federal contribution to student aid is in the form of loans,¹² with the capital for most loans provided by the private sector, based on the government's guarantee of repayment. Thus, the total amount received by students and the total amount expended by the government tell two different stories, and illustrate the leveraging power of the U.S. Treasury. Federal expenditures for loans were only \$5.6 billion—only a quarter of what students actually received in loans.¹³



Source: *Trends in Student Aid: 1986-1996*, The College Board, September 1996.

Institutional Auspices and Sources of Aid

Federal financial aid is available in all types of postsecondary schools, including those operated under the auspices of a church or a particular religion, as long as the institution and a student's chosen program meet general requirements for participation in student aid programs.

The auspices of a student's school appear to make a difference in distribution of aid. A higher percentage of students at private institutions use student aid. An obvious explanation is that private college costs are higher, causing more students to seek aid. Another reason may be that greater sources of private aid are available to them. For example, endowment income at private institutions provided 4.7 percent of total revenue in 1992-93, nearly eight times the share of endowment revenue at public institutions.¹⁴

Forms of Financial Aid: Loans, Grants and Work

Loans

Loans, the largest portion of aid received by students, are provided in a variety of federal programs, each with its own rules and eligibility requirements.¹⁵ There are also nonfederal loans, but no source of comprehensive data about these.

Major Loan Programs. There are two major types of loans—subsidized and unsubsidized—and two different sources of loan capital—the U.S. Treasury and private lenders. Interest on loans is subsidized for students who can demonstrate financial need; unsubsidized loans are available to students regardless of need, and also to parents of dependent students, who need only demonstrate a good credit history. Finally, a consolidation loan is available that provides a single interest rate and repayment schedule for students who have borrowed from different lenders. Of these programs, the guaranteed loans from private lenders make up 65 percent of the total federal loan amount.

Small Loan Programs. The Perkins Loan, the smallest generally available loan program—providing just three percent of the capital of all loans—is targeted to exceptionally needy students. Unlike other federal loans, it is distributed according to the projected financial need of the school's population rather than based on the need of individual students, and administered by the school. Administering institutions are required to contribute a specific percentage to the loans and to collect loan payments in a revolving fund that is used to make new loans. A few other small loan programs target students in health professions and together comprise about one percent of all federal loan programs.

Non-federal Loans. Students and their parents also receive state, institutional, and private loans available outside of the structure of the financial aid system. These include conventional consumer and home equity loans and loans from postsecondary institutions themselves. Some families use credit cards to pay college costs, presumably as a last resort or a short-term solution. In addition, a number of nonprofit groups provide guaranteed loans with low interest rates to students unable to obtain enough through the federal programs. The nonprofit will typically guarantee repayment to a bank based on reserve funds developed from collecting student loan fees drawn from the loans themselves. Data are not available about the volume of nonfederal borrowing, but it is estimated to provide an additional \$1.3 billion.¹⁶

Grants and Scholarships

Institutions contribute nearly half of the direct grant and scholarship aid awarded through the financial aid system, close to the combined total of federal and state grants. Although there are numerous privately-funded scholarships, these are not included in this description of sources due to unavailability of aggregate data.

Institutional Grants. The grants provided by postsecondary institutions are in the form of tuition waivers and discounts, matches for federal programs, and scholarships and grants from endowment earnings and private sources, such as foundations.¹⁷ The portion of institutional grants that come directly from private sources is about 12 percent.¹⁸ Nationally, an average of 85 percent of the institutional and private grants are awarded based on need, while the rest have other primary criteria.¹⁹ Athletically related aid is considered a part of institutional aid, but is not reported separately here.

Federal Grants. The federal grant programs comprise less than a quarter of all federal financial aid. The centerpiece of these, the Pell Grant, disburses 68 percent of federal grant money in need-based awards to undergraduate students. The largest award for 1996-97 is \$2,470, available to students whose cost of attendance is at least this much and whose families have \$19,000 or less income. The award decreases with corresponding increases in family income and estimates of the family's ability to contribute to education costs, tapering off completely after a family is judged able to pay \$2,070 toward costs, roughly corresponding with an income of about \$38,000 for a family of four.²⁰

A much smaller supplemental grant is also restricted to assisting the neediest students, and depends on matching contributions from the administering postsecondary institutions. In another program, an incentive grant is given to states to meet identified student needs, provided the federal amount is matched dollar for dollar. Other federal grants are provided to veterans and military personnel, and some small grants are available to specific groups (science students or teachers, for example) or for specific purposes.

State Grants. Nationally, states dedicate an average of seven percent of state higher education funding to need-based financial aid, including the match for the federal incentive grant. This ranges from under one percent up to twenty percent of the state's total higher education funding.²¹

College Work-Study Program

Financial aid in exchange for work is a small fraction of the overall aid available to students. This federal program requires a contribution from the administering institution of 25 percent of the total paid to the student.

The Role of Tuition Pricing and Discounting in Financing Student Aid

As noted earlier, one source of institution-provided financial aid is current tuition revenue. Not surprisingly, practices in setting and discounting tuition prices have an impact on the amount of revenue collected and aid distributed at each institution.

Pricing to Cover Costs

How do postsecondary institutions set their tuition rates? The full advertised college tuition price, or "sticker price" as it is commonly called, reflects the per student revenue sought to offset expenditures. Generally, the sticker price reflects all costs less subsidies provided by revenue from an institution's endowment and fundraising efforts, and in the case of public institutions, from state funds. The operating and improvement costs not covered by subsidies are sought in tuition. The full tuition price, then, represents a per student share of the institution's costs, reduced by the subsidy provided to all students.²²

Tuition Pricing as a Strategy in Financing Higher Education. Colleges and universities, like other businesses, pass costs along to consumers. The primary beneficiaries—students and their families—are expected to pay the full tuition price, unless they demonstrate financial need or receive aid based on other criteria. If the price is beyond the family's means, the amount the student and family cannot contribute is sought in financial aid from federal, state, and private sources, and only after tapping these, from the institution's own funds for financial aid from non-tuition revenue. By establishing a full tuition price that is a share of the institution's unsubsidized costs, revenue to cover those costs is thus maximized from families that can pay the sticker price and from sources of financial aid that will supplement the family's contribution.

Cost Components of Tuition: Quality and Financial Aid

Costs that are shared with tuition-payers include expenditures for two essential components of the institution's quality: the faculty and the student body. Qualified faculty are attracted and retained, in part, by adequate compensation, which is a major component of the tuition price.²³ Similarly, the full price tuition reflects expenditures for financial aid from current revenue—resources used to increase access or to attract students who are likely to contribute to the institution's caliber of education. Thus, those who pay the sticker price help to finance the education of those who do not.

Issues in Using Tuition Revenue to Finance Aid. Providing financial aid from tuition revenue has been decried by some as a Robin Hood approach to financial aid. However, institutional financial aid expenditures are viewed by many in the higher education community as essential to achieving an institution's educational objectives. Because a student body that is diverse and academically talented is considered, like faculty, an important factor in an institution's quality, financial aid expenditures are justified as a portion of the cost—and price—of education.²⁴

The Role of Tuition Discounts in Financing Higher Education

Tuition prices may differ from student to student, based on the size of discounts provided. Experts suggest that nearly half of enrolled students receive some type of tuition discount. A recent report reveals that in some schools, up to 90 percent receive discounts.²⁵ However, the role that discounts play in higher education varies:

- Some cash-strapped institutions offer discounts in order to increase enrollment and generate sufficient revenue to meet fixed costs. For these, solvency rather than financial aid is the primary

objective. Discounts help to increase gross tuition revenue while not adding significant additional costs, as long as the student pays enough to cover the marginal costs of occupying an empty seat.

- Institutions with adequate financial resources offer a reduced price to attract students who would increase the academic quality or diversity of its student body, but who might otherwise choose a less expensive school.
- Institutions with no shortage of students willing to pay the full price offer significant tuition discounts, foregoing tuition revenue, in order to achieve enrollment objectives, such as diversity.

The Financial Aid Delivery System

In the world of postsecondary financial aid the term *delivery system* refers to the interrelated components, processes and players involved in transferring aid from its sources to its recipients. Steps in the process include:

- outreach to students who could benefit from postsecondary education and financial aid;
- information and counseling about financial aid to students and parents;
- application submittal by student;
- application processing and need analysis by the federal contractor and/or private service;
- reporting to the applicant and the applicant's chosen institutions on results of financial aid application by the federal processing system and/or private need analysis service;
- packaging financial aid based on student need and available funds by the financial aid administrator;
- disbursement to the student by the institution; and
- reporting and fulfilling participation agreements with the U.S. Department of Education and private donors by the financial aid administrator and the school.

As the largest funder of student aid, it is not surprising that the federal government plays a major role in the overall delivery system. However, the timely transfer of information and funds relies on the participation of many others.

Roles and Players

The financial aid delivery system is perhaps most dependent on postsecondary campus financial aid professionals for the knowledgeable administration of the complex processes involved in informing and counseling students and dispensing aid according to thousands of federal, state and institutional regulations. On every campus they play a critical role at every stage of the process, from counseling students to packaging aid appropriately based on student needs, available resources and professional judgment.

At the front end of the delivery system are high school counselors—a vital information link to college-bound seniors. Other players in the delivery of federal aid include several federal contractors that have responsibility for a particular function, such as dispensing information to students, processing applications and managing electronic data exchange. States have roles that include matching and disbursing federal aid for certain programs and reporting to the federal government.

The College Scholarship Service offers institutions a need analysis service for determining eligibility for nonfederal aid. Banks and other lenders cooperate to loan funds. The National Association of Financial Aid Administrators provides financial aid personnel with essential training and professional development resources. The Advisory Committee on Student Financial Assistance provides Congress with independent technical expertise and recommendations.²⁶ Numerous government agencies and private organizations are concerned with the financial aid system and play a role in monitoring and

analyzing the system and making suggestions for its improvement. There are close to a hundred such entities, and their participation has helped to shape the ever-evolving delivery system.

Reaching and Informing Students and Families

Ensuring access to information about the availability of financial aid, general eligibility requirements, and the application process is the first step in reaching eligible students. The main sources of information for students and their families are high school and college counselors, libraries, the federal government's toll-free information line, free software and parent and student handbooks, and the Internet.

A more active approach is needed to reach some of the students financial aid is designed to benefit. To this end, federally funded early awareness information and outreach programs, such as Upward Bound, Talent Search and Educational Opportunity Centers, as well as state-funded initiatives are designed to reach economically disadvantaged youths to inform them of the availability of financial aid, to encourage them to finish school and continue their education, and to provide tutoring, counseling and assistance in applying for college and financial aid. Some programs start as early as fourth grade in attempts to influence a child's aspirations for the future.²⁷ However, these outreach programs reach only a small percentage of the population they target.²⁸

General Eligibility Requirements

There are a number of general requirements for receiving federal aid that form the baseline of eligibility. These include a high school diploma or its equivalent, or evidence—via testing—of the ability to benefit from postsecondary education; enrollment in an eligible program to obtain a degree or certificate; U.S. citizenship or status as an eligible noncitizen (including U.S. nationals, permanent residents, refugees, and a number of other categories); satisfactory academic progress; and for those of whom it is required, registration with the Selective Service.

Application

Application for federal financial aid must be made using the *Free Application for Federal Student Aid (FAFSA)*, and submitted directly to the U.S. Department of Education's central processing system by an annual deadline. Renewal applications are sent to students currently receiving financial aid; these require the student to simply update with any changes. Applications can be submitted on paper or electronically; software for electronic applications are available on diskette free from the U.S. Department of Education or can be downloaded from its Internet web site. Help is available for completing the FAFSA via a toll-free telephone number, and also on-line.

Some institutions prefer a closer look at a student's need before awarding institutional aid, and require students to complete a separate application for non-federal aid. Some use a private need analysis service, such as that offered by the College Scholarship Service (CSS). CSS provides the student's selected institutions with the results of the need determination along with an estimate of eligibility for federal aid. For this the student pays a \$5.00 registration fee plus a \$14.50 processing fee for each institution chosen to receive the results. The application is customized based on registration information provided by each student applicant, either by phone or via the Internet. One advantage to the CSS application is that it can be processed individually at any time of the year, providing early results to applicants, particularly helpful for students applying for "early decision/early action."

Need Analysis

Need analysis, a methodology used in determining the amount of financial aid a student needs to attend the postsecondary institution of his or her choice, is at the heart of the financial aid system. The formulas that determine a family's ability to contribute to education costs include a basic assumption that the parents have an obligation to contribute to their children's postsecondary education, and that the

student, as the primary beneficiary, also has an obligation. Equity, access and choice, core values of higher education, are central goals of the financial aid system. The formulas used to determine the amount of aid needed have traditionally been built on the foundation of these core values.

The amount that families are considered able to pay based on an objective analysis of income and assets may not match what families themselves would say they can afford. But a family's perception of affordability is subjective, and need analysis methods are employed to view family needs evenly and systematically, using objective data to produce equitable decisions.

The Basic Formula

Simply put, need is defined as the difference between what education costs at the institution of the student's choice and what a family can reasonably contribute to those costs. This is expressed in a formula as:

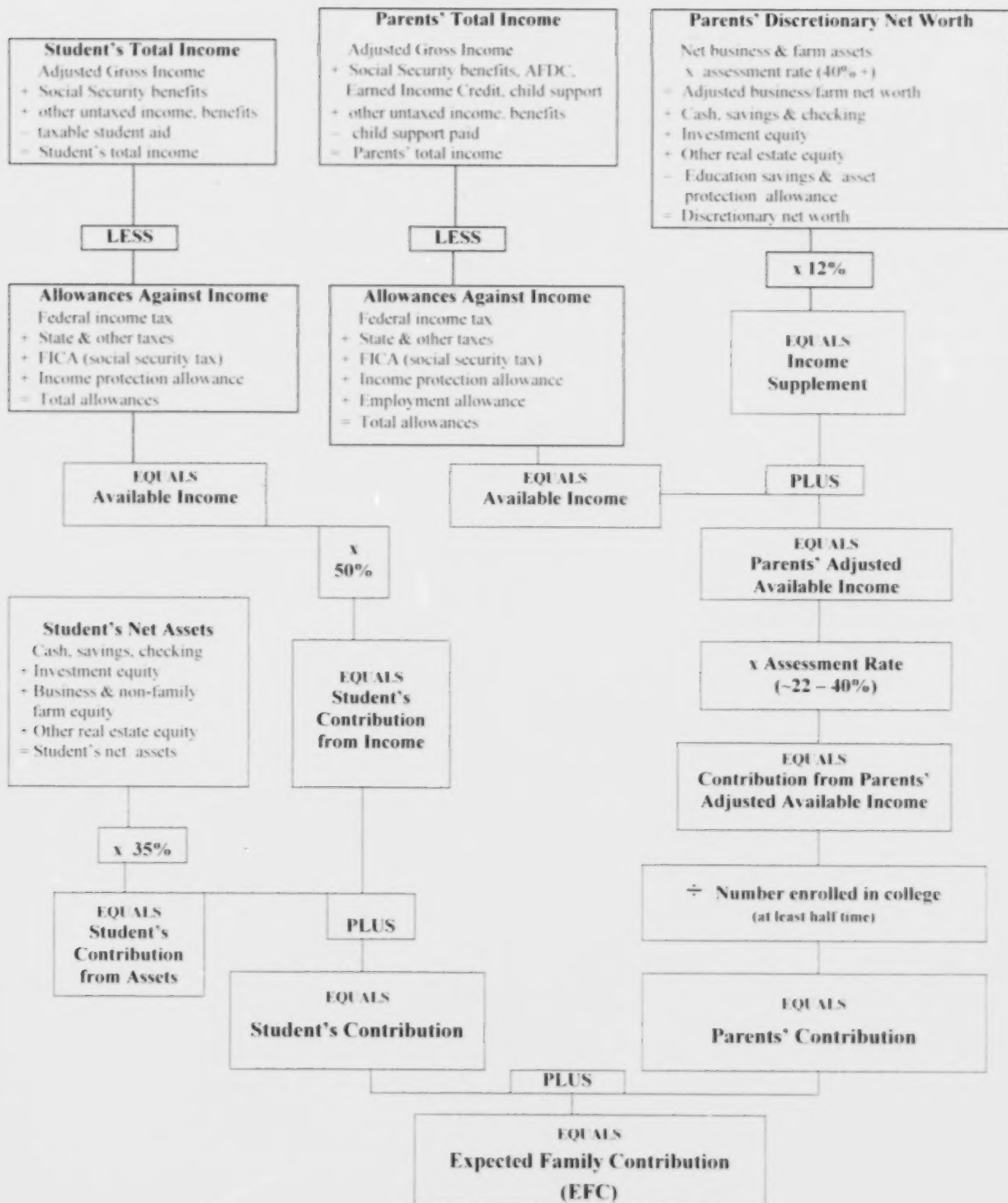
$$\begin{array}{l} \text{Cost of Attendance} \\ - \text{Expected family contribution} \\ = \text{Need} \end{array}$$

Cost of attendance. The cost of attendance (COA) includes tuition and fees, an allowance for living expense, books and supplies, and transportation. Also considered in the COA are allowances for loan fees, expenses for dependent children of the student and the additional expenses of disabled students. The financial aid administrator at each institution is responsible for constructing student expense budgets that reflect the actual costs of attendance according to general categories, such as full-time student in campus housing or half-time student in off-campus housing. Federal law mandates what is to be included in the COA, and sets minimum amounts for living expenses.

Tuition and fees represent an average of 45 percent of the COA, ranging from just 24 percent of costs for two year community college students to an average of 68 percent of costs for four year private college students.²⁹

Expected family contribution. The expected family contribution (EFC) is a measure of what the student and family can reasonably be expected to pay from discretionary income and assets based on their circumstances. This is derived from a complex analysis of the family's income and assets based on the student's status as dependent, independent with no dependents, or independent with dependents (other than spouse).

EXPECTED FAMILY CONTRIBUTION³⁰



In general, the need analysis methodologies compute available (discretionary) income by adding all income and subtracting various allowances for taxes, employment and living expenses and then adjusting the *available income* with the addition of a contribution from assets. The adjusted available income (income - expense + contribution from assets), which may be a negative amount, provides the basis for the assessment of the parents' expected contribution. Calculated starting at 22 percent up to an average of about 40 percent of the *adjusted available income*, the parents' expected contribution is then divided by the number attending college and added to the expected student's contribution. The student's contribution is arrived at through a parallel analysis, but with expectations of a 50 percent contribution from available income and 35 percent from assets. The sum of what the parents and the student are expected to contribute is the EFC.³¹

However, need analysis methodologies currently in use differ in their calculation of the EFC, so a family may be expected to contribute more or less toward the student's education, depending on the method used. For example, the Federal Methodology used in determining the EFC for federal aid does not include home equity in considering a family's assets, while the Institutional Methodology, used by some institutions in determining eligibility for nonfederal aid considers home equity an asset that puts a family on stronger financial footing. Based on this criteria alone, the Institutional Methodology may find that between families with similar income homeowners have less financial need than renters. Another important distinction between the methodologies is the basis used for estimating how much income should be protected for basic living expenses for families of different sizes.

The expected family contribution is the only constant in the basic formula, while the amount of need will vary by the cost of attendance.

Need. The amount of financial need is directly related to the cost of attending a particular institution. Greater financial need is demonstrated at institutions with greater costs, and less financial need at lower cost institutions. For example, a student's expected family contribution may cover the costs of attending a public university and therefore, the student would be ineligible for aid there, but because choice is valued in postsecondary education, the student could qualify for and receive financial aid at a private college since the EFC would not be enough to cover the higher costs. Need is not capped at a particular income level, though eligibility for some types of assistance are tied to specific income criteria.

Reporting

Results from the processing of the financial aid application are sent by the U.S. Department of Education's central processing system and from CSS via the *financial aid report* to the colleges named by the student on the application. A report is also sent to the student. Increasingly these reports are being transmitted electronically rather than on paper.

Financial Aid Packaging

A "financial aid package" is developed, based on (1) the student's demonstrated need as documented in the financial aid report, and (2) on the availability of funds at the institution. Financial aid administrators, either individually, or according to the institution's policy, must make critical decisions in packaging, such as who should receive priority and what types of aid offered should be given to each student based on limited resources.

Financial aid administrators are also expected to use professional judgment to adjust different data elements of the need analysis formula if they believe the student's situation warrants changes. Federal rules prohibit simply changing the award amount or changing any elements that would apply to a category of students rather than just to an individual student. The CSS service allows institutions to indicate a number of different preferences in need analysis elements when processing applications

for student aid at their institution, such as disallowing business losses or allowing for private elementary and secondary tuition expenses.

Disbursement

The institution requests federal funds from the U.S. Department of Education for specific students based on the amounts awarded through the different federal programs. Options for disbursing funds to students include check, cash, electronic funds transfer, and crediting funds to the student's account for school charges.

Quality: Accreditation and Accountability

In order for postsecondary schools to be eligible to receive and manage federal financial aid funds, baseline quality and accountability must be established. The U.S. Department of Education relies on a number of measures to determine quality, but perhaps the most fundamental is the institution's accreditation status. Two other baseline quality criteria must also be met: an institution must (1) be legally authorized in the state it operates; and (2) admit only those who have a high school diploma or its equivalent or those beyond the state's age of compulsory school attendance.

Three types of institutions may apply to participate: an institution of higher education (public or private nonprofit); a proprietary institution of higher education (private, for-profit); and/or a postsecondary vocational institution (public or private nonprofit). All of these must be accredited by an accrediting agency or association approved by the U.S. Department of Education.

The law requires that an approved accrediting entity performs on-site inspections with "particular focus on educational quality and program effectiveness, and ensures that accreditation team members are well-trained and knowledgeable with respect to their responsibilities."³² The basic areas which accreditation must assess include curricula, faculty, facilities, equipment and supplies, fiscal and administrative capacity, and tuition and fees in relation to its program and objectives.

The federal government, then, relies on private agencies and associations to determine, through accreditation, the basic quality of the institutions to which the funds will go. The quality will depend on the standards of the accrediting body, but according to law, the standards must ensure that the programs accredited are "of sufficient quality to achieve, for the duration of the accreditation period, the stated objective for which the courses or the programs are offered."³³

In addition, there are specific qualitative standards for short-term programs offered by proprietary or postsecondary vocational schools, including verified completion and placement rates, requirements for a minimum period of the programs' existence and program length. An eligible institution may offer some programs that are eligible to receive student financial aid funds and some that are not.

Finally, institutions must demonstrate administrative capability and financial responsibility through annual financial and compliance audits. The audits provide evidence of adherence to regulations governing administrative and fiscal standards, admission standards, academic year requirements and a number of other requirements. When an institution's audit reveals problems, a more intensive on-site program review is undertaken that may result in corrective action if noncompliance is confirmed.³⁴

Although the U.S. Department of Education relies on accreditation as an indicator of basic quality, the function of accreditation in higher education differs from its current function in early care and education. Accreditation of early childhood programs now serves as a distinction that a program has achieved higher quality than what is required to obtain a state license to operate.³⁵ Accreditation in higher education connotes a basic level of acceptability, rather than an indication of good or

excellent quality. But this may change. Persistent concerns about quality in higher education have sparked debates about new methods and standards in accreditation that may eventually lead to a new definition and status of accreditation.

Implications for the Early Care and Education System

A number of strategies of the postsecondary financial aid system are worthy of further study to determine their applicability to early care and education. Although early care and education and higher education share some similarities—a reliance on consumer choice and concerns about affordability for families, for example—there are also important dissimilarities, and strategies must be carefully adapted to the attributes of early care and education programs and families with young children.

As an example, the ability of families to pay is generally different—when children are young their parents are often close to a beginning point in their careers and earning power while parents of college-bound children are usually in their peak earning years, have more resources at their disposal, and have had time to save for college. Further, the primary beneficiary of postsecondary education, the student, is in a position to borrow and repay loans based on his or her own earning potential.

Though reliance on loans or savings for families to pay early care and education tuition does not appear to show great promise, there are other possible uses for loans in early care and education. These, along with additional sources and forms of financing, provide some intriguing possibilities for exploration, as do the analytic tools and processes used in the aid delivery system. Understanding the policy assumptions and goals that have shaped the postsecondary student aid system is also important in developing an overall financing plan for early care and education.

Promising Strategies for Financing Early Care and Education

Postsecondary education institutions have been successful in generating revenue from a variety of sources.³⁶ The portion received as tuition and fees—the sources examined in this paper—includes the amount paid by students and their families and the financial aid that students receive from public and private sources.

Of the two major forms of financial aid awarded to postsecondary students—loans and grants—grants are most similar to the type of aid currently used by families for early care and education. The federal trend away from need-based grants for student aid and the current political disenchantment with social investment in general makes it clear that potential new sources and strategies of nonfederal aid must be investigated and pursued.³⁷ In light of this, it is noteworthy that postsecondary institutions themselves provide the largest portion of grant aid to students, using a variety of sources and strategies to do so.

Postsecondary financing strategies are worth studying to determine their feasibility for early care and education financing, including (1) leveraging public and private funds, and (2) maximizing tuition revenue from families and student financial aid.

Leveraging Public and Private Funds

The federal government and institutions of higher education share a potent practice in producing financial aid dollars: leveraging. By establishing an endowment fund from contributions and investing wisely, institutions leverage the principal to earn interest for making financial aid grants. A portion of the annual earnings from interest is reinvested to increase the principal, which in turn produces increased earnings for granting additional aid. The U.S. Treasury is effectively used as leverage to secure private capital for student loans when the federal government guarantees repayment of student

loans to private lenders. Utilizing federal and non-federal dollars to secure additional funds are both promising strategies that offer potential as part of an overall financing plan for early care and education.

Endowments. Endowment earnings are a good source for grant aid, probably the form of assistance that is best suited to families with limited income and assets. Although some early care and education programs have their own endowment funds, the number of these and the value of their assets are unknown. There are obvious barriers to effectively employing an endowment strategy in early childhood programs. First, to produce sizable earnings the endowment itself must be sizable, and the relatively large number of programs and small numbers of children in each would tend to diffuse donor capital for endowments. Second, some programs, such as family child care, may be incompatible with a long term investment strategy for producing income. Third, considerable business management expertise is essential in establishing and overseeing an endowment, but training for administrators of early care and education programs is scarce, and in many states, not required.³⁸

One solution to these obstacles is a community-based, centrally managed endowment fund, not unlike a community foundation fund. Earmarked specifically for early care and education financial aid, the earnings could be awarded as aid to families that demonstrate need through an early childhood financial aid system. Potential donors in a community could contribute to the same stable, central entity that has as its mission assisting families to pay for early care and education. In so doing, funds and earnings would be maximized to fulfill their purpose, and provisions could also be made for donors wishing to specify donations for certain programs or types of programs they prefer.

Loans. In early care and education, loans are probably better targeted as financing for programs than as financing for families to pay tuition. Burdening young families with debt has drawbacks, considering that parents with young children are typically struggling to establish a home and provide for their children, or even to complete their own education or pay back their own student loans. But for some families, this may work, and the viability of a strategy to provide subsidized, low interest loans to families to pay for early care and education services should be explored as one potential form of aid in an array of financing strategies to meet the needs of a full range of families and components of the early care and education system.

Low interest loans can be an excellent resource for early care and education programs to finance capital expenditures and program improvement efforts. A number of states currently subsidize, guarantee and make direct loans to early childhood programs. One state even operates a revolving loan program.³⁹ Early childhood programs in all states could benefit from similar opportunities, and federal loans—subsidized, guaranteed, and direct—would help to provide a new and important source of financing. If a federal loan program were operated by the state or a community as a revolving loan fund, similar to the federal Perkins loan for students, with a required state match, funds could grow with the collections of loan payments. Private investors could also be invited to lend through the program or through a separate, but similar program.

Maximizing Tuition Revenue

Understanding pricing practices in higher education would be helpful for early care and education planners seeking to maximize tuition revenue from families and sources of financial aid. Colleges and universities—especially private institutions—maximize revenue from tuition with two related pricing practices: (1) setting the full tuition price at a level that represents each student's share of the institution's costs not covered by non-tuition revenue; and (2) when under-enrollment at the full price will not cover the institution's expenses, discounting prices in order to boost enrollment and revenue.

Discounting tuition is relied upon as a revenue maximizing strategy primarily by cash-strapped institutions unable to draw enough students on the strength of their programs and reputation alone.

However, the practice of establishing a full tuition price is common to all postsecondary schools, and is key to seeking its payment from families. Those who cannot pay the full tuition price can then request financial aid, which supplements what families pay up to the school's full price⁴⁰ (plus other attendance costs). Revenue is thus maximized from the major sources of tuition.

These strategies for maximizing tuition revenue are promising for potential use in early childhood programs—provided that, as in postsecondary education, there would be a system for determining families' ability to pay and identifying sources of financial aid to supplement the family's contribution.

Setting Tuition Prices in Early Care and Education Programs. In early childhood programs, as in higher education, subsidies lower the tuition price by reducing the expenditures that need to be covered by tuition revenue. The largest subsidy by far is that provided by the foregone wages of underpaid professional staff. Other typical subsidies include cash and in-kind donations, such as reduced cost or donated space, goods and services. Together these staff and institutional subsidies allow early care and education programs to charge nearly half as much as the per child cost would be without them.⁴¹ It is the reliance on foregone wages as a subsidy that distinguishes the tuition-setting practices of early childhood programs from those in postsecondary education.

Families in early childhood programs are typically charged the same flat rate, unrelated to their ability to pay, thus subsidizing even those families who could pay more of the per child cost—costs that are typically born by the staff. Few programs have the administrative resources to analyze ability to pay, so sliding fee scales, when used, may suffer from methodological weaknesses that undermine the intent of offering the lowest rates to the poorest families.

In the National Association for the Education of Young Children's Full Cost of Quality Campaign, it is noted that to achieve quality in programs for young children, subsidies provided by staff through foregone wages must be transferred from staff to other sources.⁴² This is precisely what the full tuition price in postsecondary education achieves. A similar approach could be taken in early childhood program pricing to shift costs to higher income parents and other sources, if a sound need analysis method is used to identify how much families can pay, and additional sources of funds are cultivated for financial aid.

One thing is fairly certain: if the full price of education is to be paid, the cost of fairly compensating educators must be included in the tuition price of early childhood programs, to the extent this cost is not covered by non-tuition revenue.

Maximizing revenue from all potential tuition sources essentially requires reinventing how early care and education programs price services. These and related ideas that can be culled from higher education pricing practices deserve attention from the early childhood community as efforts are made to find new ways to pay what quality really costs.

Promising Strategies in Financial Aid Delivery

Financing of direct aid to students and families is not possible without an infrastructure for assessing families' need for assistance and for distributing aid equitably. Strategies used in the postsecondary financial aid delivery system can be adapted for administering financial aid in early care and education, including:

- community-based financial aid administration;
- outreach and information to families;
- centralized processing of a standard financial aid application;

- use of a need analysis methodology to determine ability of families to pay;
- packaging aid from multiple funding sources; and
- use of private sector accrediting entities to assure quality in programs receiving financial aid funds.

Community-Based Financial Aid Administration

In the early care and education system, a financial aid administrator in every program or the addition of these responsibilities to the director role is unrealistic. Instead, a coordinated early childhood financial aid administration could provide greater ease for families, improved efficiency, and wiser use of resources. A family-oriented agency which is a hub for information, such as a child care resource and referral agency or a family center, could serve as the central point of contact in a community, similar to the financial aid office on a college campus, provided it is accessible to all and not associated with a specific income group.

In the postsecondary model, students from the entire income spectrum are assisted from the school's single financial aid office, using the same basic tools of analysis to distribute aid from multiple funding sources. Although the type, amount and source of aid varies depending on available resources and specific eligibility criteria, there is no social stigma related to receiving assistance. For example, based on one analysis, all but seven percent of families, those with family income above \$102,000, could qualify for some assistance in paying attendance costs at the most expensive private colleges.⁴³ This is markedly different from the division that current early care and education funding streams impose on families with young children—financial assistance for early care and education has commonly been directly or indirectly associated with welfare, and not generally available to a wide range of income groups.

Another advantage to a centralized community-based approach to financial aid administration is the removal of the assessment of family need from the program-family relationship. The provision of family financial information may be a sensitive issue in the smaller, more intimate environment of an early care and education program than it is in a college financial aid office, but an office apart from the early care and education program would provide a degree of anonymity.

Outreach and Information to Families

The U.S. Department of Education and several states and private organizations have made efforts to broaden outreach and provide information to families about the benefits of a postsecondary education and the availability of financial aid to help pay for it. Some of the strategies used that could be adapted for reaching families with young children include the use of public libraries, the Internet and nationwide toll-free telephone numbers. These information outlets, in addition to early care and education programs, pediatricians, resource and referral agencies, family centers, and other community agencies, would help to make financial aid applications widely available, and help to de-stigmatize the process of applying for financial assistance. Additionally, the financial aid administrator in each community could provide more personalized information and counseling about financing options for families.

Central Processing of Financial Aid Applications

As in the postsecondary financial aid system, a standard financial aid application could be developed that would collect information needed to determine a family's ability to pay. Likewise, applications could be processed centrally by a need analysis service, whether federal, state or private, and the results sent to the family and the agency that serves as the early care and education financial aid office in the community.

Need Analysis: A Measure of Affordability

Following the postsecondary model, a need analysis methodology would be needed in an early care and education financial aid system as a basis for making financial aid awards for early care and education services. A methodology based on cost-of-living research data would also help early care and education planners to understand affordability of early care and education programs for families according to income, family composition, geographic region, and a host of other variables.

In developing a methodology for early care and education, care must be taken to use data elements and assumptions that account for the different characteristics and situations of families with young children, and that provide a defensible basis on which to judge a family's ability to pay. Economists with expertise in financial aid need analysis could provide valuable assistance in creating a methodology based on relevant criteria.

It is important to recognize, however, that need analysis is not a silver bullet of absolute equity. It is impossible to construct a methodology entirely devoid of subjective premises.⁴⁴ For example, there will always be differing views on what constitutes a family's basic living expenses and what constitutes discretionary expenses. Need analysis is a tool that reduces subjectivity in aid decisions to a set of explicit assumptions embedded in formulas that can be applied evenly to all applicants. Yet, subjectivity is essential at times. The postsecondary aid system allows for professional judgment to be used to make adjustments to the formulas when unusual family situations warrant it. This practice should also be incorporated in an early care and education financial aid system.

Complaints from students and parents about financial aid application forms are common. Current proposals for changes to the federal system include eliminating numerous factors from need analysis in order to make the application the size of a postcard. Although simplicity in need analysis certainly has appeal, it is usually achieved at the expense of fairness. Accountability for equity in distribution of financial aid depends on a sound need analysis methodology, even though perfection in a methodology is illusive.

Financial Aid Packaging

The financial aid administrator plays a critical role in the delivery system as the one responsible for packaging aid appropriately. The early care and education financial aid package, like that in postsecondary schools, would be developed with aid from multiple public and private funding sources, based on the type of program the family seeks, the family's own resources, and the available funds. For example, perhaps it is not unreasonable to expect that Head Start funding, as part of a financial aid system for early childhood programs, could follow the eligible child to an accredited program of the parents' choice that also met Head Start program criteria.

Quality Assurance

Quality of education is supported in federal funding of student aid by requirements that the student attend an eligible program in an accredited institution. Although accreditation has different definitions in early care and education and postsecondary education, the basic purpose—quality assurance—is the same. The postsecondary model—relying on private entities with appropriate expertise to accredit programs—merits close consideration for adaptation in early care and education in conjunction with a financial aid system.⁴⁵

Concerns about accreditation and quality in higher education, however, suggest it is important for early care and education planners to understand the federal government's current role in approving accrediting agencies, the legal and operational criteria for organizations that accredit postsecondary institutions, and the role of accreditation in general in postsecondary education. Planners should also consider these questions:

- If accreditation were required of all early care and education programs receiving federal financial aid funds, how would early care and education accreditation need to change?
- Would a changed accreditation system assure quality in early care and education programs? How?

Potential Pitfalls

The postsecondary financial aid system has evolved into a massive and complex system, quite likely far different from what its original architects envisioned. For example, one characteristic of the current system is the dominant federal role, and the thousands of regulations that come with this. Another is the erosion of need-based standards on which the system was originally based. These and other concerns discussed in higher education policy forums can alert early care and education planners to the potential pitfalls of the postsecondary financial aid system, informing the development of a system designed to fit the unique characteristics of early care and education programs and the families that use them.¹⁰

Financing Policy Issues

For the financial aid system as a whole, and for each of its revenue sources and delivery system components there are related financing policy issues, based on underlying federal and state policy assumptions regarding access, affordability, choice, and quality. Values and their related policies form the bedrock of any system. In considering the applicability of postsecondary education financing sources and strategies, care must be taken to consider the attendant policy issues of each.

Federal Financing Policies

Access. Federal financial aid has its roots in extending educational opportunity to those who would not otherwise be able to pay for postsecondary education. Similarly, Head Start was envisioned as a provision of equal educational opportunity for young children. What has been achieved toward these lofty goals?

Data shows that student financial assistance successfully enhanced educational opportunity for millions of students during the "equity era" of the 1960s and 1970s—increasing college attendance for low income students who would not otherwise have attended—but that since 1979 opportunity has declined and fewer low income students attend and graduate from higher education institutions.¹¹ While the share of federal dollars committed to supporting the poorest students has dwindled, the purchasing power of need-based grants has also declined in the face of spiraling college tuition increases. Stagnating family incomes since the 1980s has made assistance ever more important to the middle class as well, and it is believed by some that political pressure and influence by this constituency has resulted in the balance shifting from grants for low income students to guaranteed loans and increased grant eligibility for middle income students. The degree to which public funds should be used for social investment that assists the needy and the not-so-needy is a controversial topic with varied opinions. On what national values and goals should these financing policies be based?

Like postsecondary financial aid, Head Start has provided opportunities for families that would otherwise have been missed. Unlike federal financial aid policy, Head Start policy has retained its commitment to the poor, but Congress has not expanded it enough to serve all poor children.

Choice. In both early care and education and higher education choice is related to affordability of a chosen program—the family's ability to pay for it. There is no real choice without the ability to pay. However, for college students, choice is theoretically supported by awarding aid to cover the difference between the cost of attendance at the institution the student chooses and the student/family's ability to pay, with no cap placed on the college costs. Choice of institution is a key

value—and a major goal—in the financial aid system. The aid awarded is meant to remove any barriers that would keep an able student from an institution for which he or she qualifies and that the student believes will best meet his or her needs. Choice of institution is the goal for all students, regardless of their family's income level.

In early care and education, federal policy regarding choice is inconsistent. For families who receive free early education through the Head Start program, choice among programs is not a goal. But choice is insisted upon for families receiving welfare and work related child care assistance. In spite of an explicit policy requiring that families choose their own preferred child care arrangements, Congress has capped the amount that can be paid. Choice is thus limited by what the family can contribute plus the amount of financial assistance for which they qualify. As a result, many families do not have a real choice. Families must choose a less expensive "choice" allowed by the funding source—which may not need to meet any quality criteria.

Quality. Federal policies related to quality, like those related to choice, are glaringly inconsistent. Accreditation is relied upon as an indicator of quality in higher education, and performance standards and staff qualifications are relied upon to assure quality in Head Start. In contrast, there is a near absence of concern in federal policy about quality for families receiving welfare and work related child care assistance, leaving families with the responsibility to choose but not the resources to pay for quality.

State Financing Policies

Access. Access is a major goal for states in subsidizing state colleges—based on the notion that a subsidized tuition rate produces access for a greater percentage of the eligible population. States pay from 45 to 88 percent of the education costs at their public colleges. The value of this subsidy ranges on average from \$3,141 to \$10,539 per student in the form of a subsidized, or reduced tuition price, and is provided regardless of the student's financial need.⁴⁸ Yet, tuition is rising, and fewer students can afford even the subsidized rate. It is argued by some higher education policy analysts that states should adopt a "high tuition/high aid" philosophy to maximize revenues from the students whose families can afford to pay the full tuition and to utilize the savings to provide greater financial aid to those who truly need it.⁴⁹

A growing number of states are now supporting their own preschool or prekindergarten programs in public schools or in private facilities operated by contracted private entities, provided free or at a subsidized rate for four year olds.⁵⁰ This represents a significant public investment in early care and education, and an important trend. In considering state subsidized higher education and state subsidized early childhood education together, some policy questions emerge. For example, should there be universal access to free early care and education services for all four year olds, while children ages 0-3 have no state-subsidized access? Should state early care and education investment follow a high tuition/high aid model that targets state aid to those who cannot afford the services, while collecting full payment from those who can pay what it costs?

Choice. For the great majority of students, choice offered through state higher education funding is limited to choosing a state-supported college or university. Nationally, a very small percentage of postsecondary students are provided with expanded choices through state grant programs that allow attendance at private or out-of-state institutions⁵¹ and through reciprocity agreements among states that provide for a reduced tuition rate for qualified students in specific out-of-state institutions and programs.

State-funded prekindergarten programs delivered through public schools or contracted programs follow this same model, with the emphasis on providing access rather than choice. However, some state-funded tuition assistance programs for young children encourage choice in private sector early

care and education programs rather than serve children in a state program, although the dollar amount, usually capped, may not allow full choice among quality programs.

Quality. In the case of state funding for higher education institutions or prekindergarten programs, quality is in the state's hands—and budget. To ensure baseline quality in their own preschool or prekindergarten programs states would need to adopt and follow standards that ensure the level of quality they seek. For tuition assistance programs in which state or local funds are given to families to choose a program, state policy supporting quality would require that programs meet funding standards that produce the particular level of quality to which the state is committed.

Next Steps

Because of the federal government's current dominant role in student financial aid, it is worth emphasizing that it was a motivated group of private providers of higher education, not government, that laid the foundation for the current financial aid delivery system. The same sort of initiative could be taken in early care and education, largely a private sector enterprise, to develop a standard financial aid application, a need analysis methodology, and a community-based delivery system that allows for efficient, centralized financial aid packaging of public and private funds for use in accredited early care and education programs. If further study suggests its feasibility, private sector initiative could also establish endowment funds in appropriate state or community-based organizations.

One thing is certain, financing is only one part of the solution to the persistent lack of resources in early care and education. Financing policies play a critical role in determining how resources are generated, used and distributed, and must be carefully crafted to provide the foundation for the future we seek to create. The prevailing current conditions of limited access, choice, affordability, and quality in early childhood and higher education are not just the result of inadequate financing, but also the outcome of uncoordinated and poorly conceived policies.

A confluence of factors suggest that the time is right for our nation to develop a comprehensive education financing policy based on an understanding that education and learning are a life long process beginning at birth.

Powerful new evidence of the critical nature of learning and development in the early years underscores the important role of quality early care and education in supporting children's growth and development. As welfare reform increases the demand for child care, the critical role of early care and education in helping families to work and contribute to the economy is being demonstrated. At the same time, research documenting the poor quality of the nation's early care and education programs and the potential harmful consequences for children highlights the underlying problem of inadequate financing. Moreover, early care and education, like higher education, has been described in economic terms as a *merit good*, something to which all, because of its value, should have access—regardless of ability to pay.

Problems with financing plague all levels of education. Competing demands for public funds come from all quarters: early childhood programs, K-12 education, and postsecondary schools. For example, a growing number of families are unable to afford college, and there is pressure for additional public support. There are concerns that increasing numbers of high school graduates are unprepared for college and must take remedial courses; some have noted that federal financial aid pays for this remediation, essentially doing the job left undone by the locally-financed public school system. Meanwhile, there is an increasing demand for choice and vouchers in public schools, and suggestions that public funding for the last two years of high school follow the student to vocational training or college.

Education has what economists call *positive externalities*—in other words, while the benefits of education accrue to the child or student, there are additional benefits that accrue to others in society.⁶² It could be argued that this is especially true of quality early childhood education and care. But it takes all levels of education together to produce the positive externality of an educated populace that can equally participate in and enjoy a democratic society.

For this, we need to take a longer view of public funding responsibilities. A comprehensive education financing plan, built upon our nation's values of access, equity and choice, should aim to maximize all public funds currently used and to allocate these appropriately at each educational level, considering the other resources available, including those of families and employers.

Endnotes

- ¹ The term *early care and education* is used throughout this paper as shorthand for early childhood education and child care. For the purposes of this paper, this term refers to the care and education of young children from birth until they are age-eligible to enter the public school system.
- ² Sources for analysis: (1) Gomby, D.S., Krantzler, N., Lerner, M.B., Stenvenson, C.S., Ferman, D.L., and Behrman, R.E. (1996). *Financing Child Care: Analysis and Recommendations*. In *The Future of Children: Financing Child Care*, 6 (2), 5-25. (2) Mortenson, I. (1996). The story told by the national income and product accounts. *Postsecondary Education Opportunity*, 34. (3) National Center for Education Statistics (1996). *Enrollment in higher education: Fall 1986 through fall 1994*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, NCES 96-851. and (4) National Center for Education Statistics (1995). *Child care and early education program participation of infants, toddlers, and preschoolers*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, NCES 95-213. Inputs for analysis: Gomby, et al., estimate \$18 billion in public funds were spent on child care in 1995. NCES reports about 12.9 million children under six were in non-parental care in 1995. Mortenson estimates \$65 billion was spent in public funds for postsecondary financial aid in 1994 from federal, state and local governments, including appropriations to institutions, grants to students and loan programs costs (but not including the amount loaned to students). NCES reports 14,279 million students were enrolled in higher education institutions in 1994. Limitations of data: Child care data is for 1995, higher education data is for 1994.
- ³ Mortenson, I. (1996). Family income by educational attainment of householder, 1956-1994. *Postsecondary Education Opportunity*, 46, p.14. U.S. General Accounting Office (1996). *Higher education: Tuition increasing faster than household income and public colleges' costs*. Washington, DC: Author, GAO/HEHS-96-154, p.14. Note: Mortenson's report indicates 78% higher earnings for college graduates than for high school graduates in 1994, based on Census data. An analysis of the same 1994 U.S. Census data reported in the GAO concludes that hourly wages for college graduates are 73 percent higher than high school graduates.
- ⁴ Schweinhart, L.J., Barnes, H.V., and Weikart, D.P. (1993). *Significant benefits: The High Scope Perry Preschool study through age 27*. Monographs of the High Scope Educational Research Foundation, No. 10. Ypsilanti, MI: High Scope Press.
- ⁵ Begley, S. (1996, February 19). *Farm your child*. *Newsweek*, 55-61. and Nash, J.M. (1997, February 3). *Fertile minds*. *Time*, 48-56.
- ⁶ Hauptman, A.M. (1995). *Cut the cloth to fit the student: Tailoring the federal role in postsecondary education and training*. In *Financing Postsecondary Education: The Federal Role. Proceedings of the National Conference on the Best Ways for the Federal Government to Help Students and Families Finance Postsecondary Education*, held in Charleston, SC. Washington, DC: U.S. Department of Education, Office of Postsecondary Education.
- ⁷ Glabeux, L.E. (1995). *Federal student aid policy: A history and assessment*. In *Financing Postsecondary Education: The Federal Role. Proceedings of the National Conference on the Best Ways for the Federal Government to Help Students and Families Finance Postsecondary Education*, held in Charleston, SC. Washington, DC: U.S. Department of Education, Office of Postsecondary Education.
- ⁸ Mortenson, I. (1996). The story told by the national income and product accounts. *Postsecondary Education Opportunity*, 34.
- ⁹ College Scholarship Service (1993). *Manual for student and administrators: 1993-94 Policies and procedures*. New York: College Entrance Examination Board.
- ¹⁰ College Scholarship Service (1993). *Manual for student and administrators: 1993-94 Policies and procedures*. New York: College Entrance Examination Board.
- ¹¹ F. Balz, National Association of Independent Colleges and Universities, personal communication, December 31, 1996. Mr. Balz also noted that aggregate data about private scholarships awarded directly to students is not available.
- ¹² The College Board. (1996, September). *Trends in student aid: 1986 to 1996*. New York: Author.
- ¹³ U.S. Department of Education Student Financial Assistance Programs. (1996). *The federal student financial aid handbook*, 1996-97. Washington, DC: Author.

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- ¹⁵ The College Board. (1996, September). *Trends in student aid: 1986 to 1996*. New York: Author.
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- ¹⁷ Data for this category is not very reliable; the precise amounts from component sources of institutional aid are not known. L. Gladieux, The College Board, personal communication, January 10, 1997.
- ¹⁸ Mortenson, T. (1996). Federal, state, private and institutional financial aid by state, 1994-95. *Postsecondary Education Opportunity*, 54, p. 16 provides a break down of institutional and private aid for 1994-95 that is applied to the estimate of institutional aid for 1995-96 reported in The College Board. (1996, September). *Trends in student aid: 1986 to 1996*. New York: Author.
- ¹⁹ T. Mortenson, Higher Education Policy Analyst, The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education, personal communication, January 16, 1997.
- ²⁰ Pell Grant amount is from: U.S. Department of Education Student Financial Assistance Programs. (1996). *The federal student financial aid handbook, 1996-97*. Washington, DC: Author, p. 4-6. Income estimate is derived from Mortenson, T. (1996). Children, family income and college affordability. *Postsecondary Education Opportunity*, 46, p. 5, and additional analysis.
- ²¹ Mortenson, T. (1996). Federal, state, private and institutional financial aid by state, 1994-95. *Postsecondary Education Opportunity*, 54, p. 16.
- ²² In setting tuition, some institutions also consider their competition, and equating price with prestige, try to keep pace with tuition rates at comparable institutions in order to attract students of similar caliber. See Jenkins, R. E. (1996-97, Fall/Winter). The dangers of current tuition strategies. *Student Aid Transcript*, 4-7. Rasch, D.E. (1990). Student financial aid as a method of cost sharing at private colleges. *Journal of Student Financial Aid*, 20 (1), 5-19. Ervey, K. (1997, May 30). An inside look at how a private research university sets tuition rates and spends the money. *The Chronicle of Higher Education*, A12-15. Gose, B. & Geraghty, M. (1997, May 30). Comparisons of tuition rates raise tough policy questions. *The Chronicle of Higher Education*, A15-16.
- ²³ It should be noted, however, that faculty compensation is not paid by tuition revenue alone. At most postsecondary schools, non-tuition revenue (endowment and fundraising income) partially subsidizes compensation as well as well as other operating costs. Source: S. Baum, Professor of Economics, Skidmore College, personal communication, September 30, 1997.
- ²⁴ While financial aid provided from an institution's endowment or fundraising efforts are considered expenditures, some argue that tuition discounts are different—reflecting reduced revenues rather than actual expenditures. For a discussion of these and other discounting issues, see: Bowen, W. G., & Breneman, D. W. (1993, Winter). Student aid: Price discount or educational investment? *The Brookings Review*, 28-31. Baum, S. (1996, June). *A primer on economics for financial aid professionals*. Washington, DC: The College Board & the National Association of Student Financial Aid Administrators (NASFAA). Jenkins, R. E. (1996-97, Fall/Winter). The dangers of current tuition strategies. *Student Aid Transcript*, 4-7. Rasch, D.E. (1990). Student financial aid as a method of cost sharing at private colleges. *Journal of Student Financial Aid*, 20 (1), 5-19. Rasch, D.E. (1996). Pricing difference among private colleges: The impact of discounting through college funded grants. *Journal of Student Financial Aid*, 26 (3), 41-59.
- ²⁵ Gose, B. & Geraghty, M. (1997, May 30). Comparisons of tuition rates raise tough policy questions. *The Chronicle of Higher Education*, A15-16.
- ²⁶ Merisotis, J.P. (1996, March). *The 1997 reauthorization of the higher education act: An analysis of the current policy environment*. Washington DC: The Advisory Committee on Student Financial Assistance.
- ²⁷ A. Coles, The Educational Resources Institute (TERI), personal communication, January 15, 1997.
- ²⁸ Gladieux, L.E. (1996). *College opportunities and the poor: Getting national policies back on track*. Washington, DC: The College Board and The Center for the Study of Opportunity in Higher Education.
- ²⁹ Based on an analysis of national average college attendance costs for 1995-96, as reported in Mortenson, T. (1996). Children, family income and college affordability. *Postsecondary Education Opportunity*, 46.

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- ³⁰ Sources: U.S. Department of Education Student Financial Assistance Programs (no date) *The EFC formula book: The expected family contribution for federal student aid, 1996-97*. Washington, DC: Author; College Scholarship Service. (1996). *CSS/Financial aid profile: 1997-98 Users' guide*. New York: The College Board.

Note: The EFC model shown here is based on the Federal Methodology for dependent students. Modified computational models are used for families with income below \$50,000 (assets are not included) and those with income below \$12,000 (the EFC is an automatic zero for these families). The method refers to and requires the use of formulas and tables not shown here, including a table to adjust net worth of a business or farm, allowances for state and other taxes and FICA, employment allowance, income protection allowance, education savings and asset protection allowance, and a table that shows the expected contribution from adjusted available income. Interested readers are directed to the sources for detailed information.

- ³¹ Sources: U.S. Department of Education Student Financial Assistance Programs (no date) *The EFC formula book: The expected family contribution for federal student aid, 1996-97*. Washington, DC: Author; College Scholarship Service. (1996). *CSS/Financial aid profile: 1997-98 Users' guide*. New York: The College Board. Analysis: The lowest assessment rate is applied to those with AAI of \$10,300 or less. The highest assessment rate of adjusted available income (AAI) is 47% of the amount over \$20,700 (for 1996-97) plus \$5594 (27% of the first \$20,700 of AAI) ($\text{Total AAI} - \$20,700 \times .47 + \$5594$). For example, using this formula, parents with AAI of \$60,000 would be expected to contribute \$24,065, which amounts to an average of 40% of their AAI. Since this amount is greater than the attendance costs at most colleges, the family would not qualify for financial aid. Because the assessment is progressive, parents with less AAI would be assessed at progressively smaller average percentages of AAI. For example, parents with AAI of \$30,000 would be expected to contribute \$10,623—an average of 35% of AAI; those with AAI of \$15,000 would contribute an average 23% of AAI.
- ³² Public Law 102-325, July 23, 1992, Subpart 2, Sec. 496, Approval of Accrediting Agency or Association.
- ³³ Public Law 102-325, July 23, 1992, Subpart 2, Sec. 496, Approval of Accrediting Agency or Association.
- ³⁴ *Institutional Oversight: Hearing before the Subcommittee on Human Resources and Intergovernmental Relations, of the U.S. House of Representatives Committee on Government Reform and Oversight*, (June 6, 1990) (Testimony of David A. Longanecker, Assistant Secretary for Postsecondary Education).
- ³⁵ Morgan, G. (1996) Licensing and accreditation: How much quality is quality? In: S. Bredekamp & B.A. Willer, (Eds.) *NAEYC accreditation: A decade of learning and the years ahead*. Washington, DC: National Association for the Education of Young Children.
- ³⁶ National Center for Education Statistics. (1995). *Digest of education statistics, 1995*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, NCES 95-029.
- ³⁷ The College Board. (1996, September). *Trends in student aid: 1986 to 1996*. New York: Author; Gladieux, L.E. (1996). *College opportunities and the poor: Getting national policies back on track*. Washington, DC: The College Board and The Center for the Study of Opportunity in Higher Education.; Mortenson, T. (1996). The story told by the national income and product accounts. *Postsecondary Education Opportunity*, 54.
- ³⁸ Morgan, G., Azer, S.L., Costley, J.B., Genser, A., Goodman, I.F., Lombardi, J., and McGimsey, B. (1993). *Making a career of it: The state of the states report on career development in early care and education*. Boston, MA: The Center for Career Development in Early Care and Education at Wheelock College.
- ³⁹ Mitchell, A., Stoney, L., and Ditcher, H. (1997). *Financing child care in the United States: An illustrative catalog of current strategies*. Philadelphia: The Ewing Marion Kauffman Foundation and The Pew Charitable Trusts.
- ⁴⁰ The terms *full tuition price* and *full price* are used here as defined in higher education financing, and should not be confused with *full cost*, a term used in the early childhood community to refer to the total cost of producing early care and education, including actual expenditures, in-kind and cash donations and the value of foregone wages commensurate with staff levels of education, experience and responsibility. For a definition and discussion of *full cost*, see Willer, B. (1990). Estimating the full cost of quality. In B. Willer (Ed.) *Reaching the full cost of quality in early childhood programs*. Washington, D.C.: National Association for the Education of Young Children.
- ⁴¹ Cost, Quality & Child Outcomes Study Team. (1995). *Cost, quality, and child outcomes in child care centers, public report, second edition*. Denver: Economics Department, University of Colorado at Denver, pp. 45-46.

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- ⁴² Willer, B. (1990). Estimating the full cost of quality. In B. Willer (Ed.), *Reaching the full cost of quality in early childhood programs*. Washington, D.C.: National Association for the Education of Young Children.
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- ⁴⁴ For a discussion of these issues, see Baum, S. (1996, June) *A primer on economics for financial aid professionals*. Washington, DC: The College Board & the National Association of Student Financial Aid Administrators (NASFAA).
- ⁴⁵ For a discussion of some of these issues, see Stoney, L. (1996). The role of accreditation in public policy. In S. Bredekamp & B.A. Willer (Eds.) *NAEYC accreditation: A decade of learning and the years ahead*. Washington, DC: National Association for the Education of Young Children.
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- ⁴⁷ Tom Mortenson as quoted in Gladieux, L.E. (1996). *College opportunities and the poor: Getting national policies back on track*. Washington, DC: The College Board and The Center for the Study of Opportunity in Higher Education., p 8.
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- ⁴⁹ Wallace, T.P. (1992). Public higher education access and affordability. *Journal of Student Financial Aid*, 22 (1), 39-41.
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- ⁵¹ New York State Higher Education Services Corporation. (1997). *The 27th annual NASSGAP [National Association of State Student Grant and Aid Programs] survey report*. Albany, NY: Author.
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